

# Reducing Acute Care Using a Community Care Coordination Network

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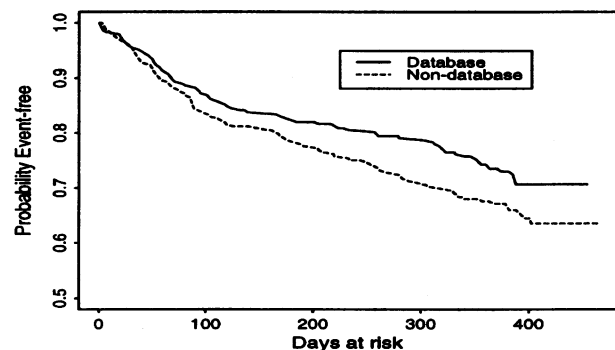
**Introduction.** Chronically ill individuals with functional impairments require intensive ongoing primary care and community-based social services to continue to reside in the community. These individuals also frequently have exacerbations of illness requiring hospitalization, and coordination of these services over time across multiple agencies is a challenge. Community based information systems hold the promise of improving coordination of care, identifying problems early potentially reducing the need for emergency services and hospitalization. The Community Care Coordination Network is a primary care-based information system sharing medical, functional, psychosocial and acute case event data with two hospitals and six community agencies. We hypothesized that if the CCCN addressed unmet functional needs, and triggered aggressive community-based case management of post-acute care, subsequent use of hospital services by this population would be reduced.

**Methods.** The target population of chronically ill and functionally impaired individuals was identified from a primary care clinic. The CCCN tested two interventions in a randomized, controlled trial: 1) a care coordination "database" to identify functional and psychosocial needs; and 2) a community care "alert" mechanism, automatically relaying data on acute care from the two area hospitals to the primary care site and any participating community agency involved in the patient's care. Both "database" and "alert" interventions triggered nurse case management and care coordination at the primary care site. The number of subsequent emergency department visits and hospitalizations for each intervention group was compared to those for the concurrent control groups.

**Results.** Of 602 patients enrolled in the CCCN program, the majority were women and African-American, with a mean age of 69, a mean of 1.5 ADL and IADL impairments, with OARS functional scores

of 10.9 and 10.5 (14 indicates no assistance required in any activity). There were no significant differences among the groups across any variable at baseline. Preliminary analysis of data from one hospital suggests that primary care-based care coordination triggered by the "database" reduced subsequent ED visits and hospitalizations by 20% over 14 months. The number of recurrent acute care events did not allow the detection of a significant effect of the "alert" intervention (figure).

Kaplan-Meier Curve for Database Intervention



**Discussion.** There is probably no population where an information system infrastructure may have a more dramatic potential for improving care and reducing costs than in the care coordination of the most impaired, chronically ill individuals. In this preliminary study, the CCCN, a primary care-based information system, reduced subsequent acute care utilization by systematically identifying unmet functional and psychosocial needs and coordinating care in the community. Further analysis of aggregated hospital data is ongoing.

## Acknowledgments

The CCCN is supported by grants from the Robert Wood Johnson Foundation and the Kate B. Reynolds Trust.